WILLARD HACKERMAN (1918-2014)

FOUNDED 1909

THE WHITING-TURNER CONTRACTING COMPANY

ENGINEERS AND CONTRACTORS

CONSTRUCTION MANAGEMENT
GENERAL CONTRACTING
DESIGN-BUILD
SPECIALTY CONTRACTING
PRECONSTRUCTION
BUILDING INFORMATION MODELING
INTEGRATED PROJECT DELIVERY

6305 IVY LANE, SUITE 800 GREENBELT, MARYLAND 20770 301-656-7800 INSTITUTIONAL
COMMERCIAL
CORPORATE
TECHNOLOGY
INDUSTRIAL/PROCESS
INFRASTRUCTURE
SUSTAINABILITY

Whiting-Turner Noise Suppression Plan

Project: HarborChase Rockville – Senior Living

Jobsite Address: 55 West Gude Drive, Rockville, MD 20850

Date: 10/14/2019



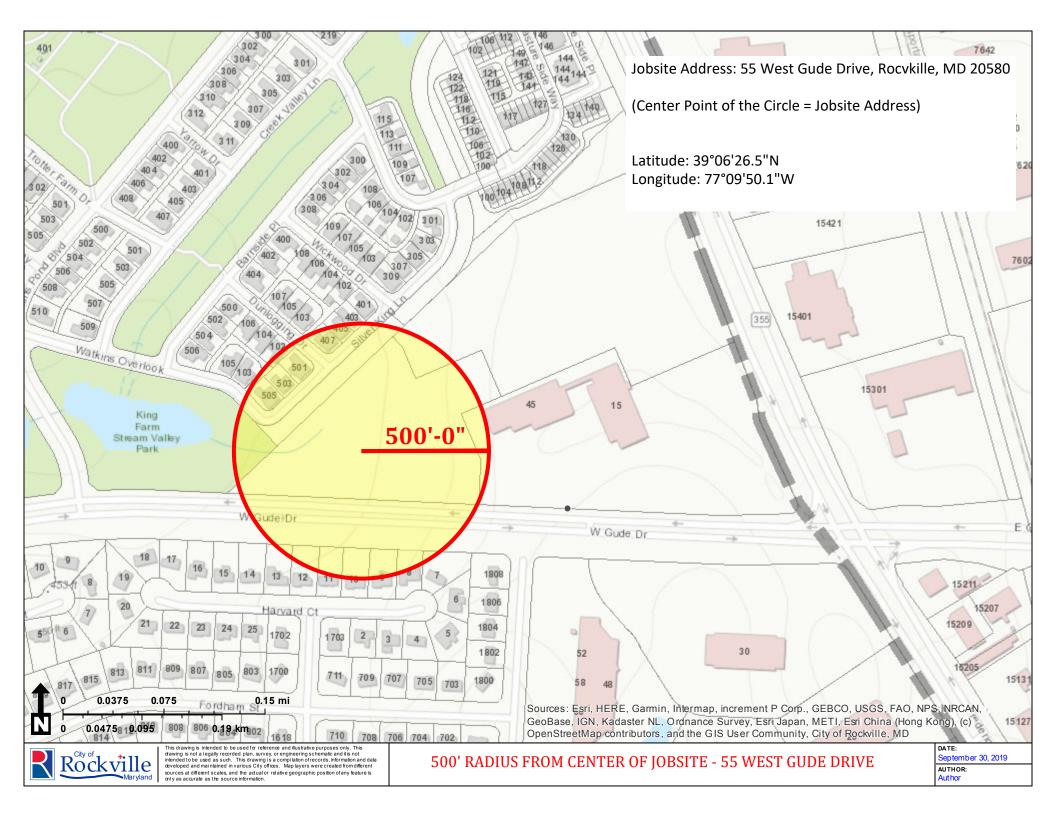
Noise Suppression - Scope of Work (Silverstone Rockville - Senior Living Project)

- Digging with excavator(s) and mini- excavator(s), driving of piles for excavation support, installation of lagging boards, drilling and grouting for a tie-back system, loading and hauling off excavated material. (November – December 2019)
 - Installation concrete foundations, concrete foundations for tower crane, foundation walls, and slab on grade. (December 2019 January 2020)
 - Tower crane erection (December 2019)
 - Concrete structure 6 stories above ground (concrete post-tensioned deck). Includes use of concrete trucks, concrete pump truck, and trowel machines for finishing of concrete and saw-cutting / grinding activities. (February 2020 – June 2020)
 - Exterior Skin/Facade work including stud framing, exterior sheathing, air barrier, roofing, masonry, window/storefront, metal panel, fiber cement siding, to be installed with a scaffolding and mast climbing systems. (June 2020 December 2020)
 - Hardscape and Landscaping (November 2020 June 2021)

The total duration of this project is 20 months (beginning November, 2019 and ending early July 2020).

*All dates provided above are anticipated dates based on the baseline construction schedule and are subject to change.







55 WEST GUDE DRIVE - 500' RADIUS ADJACENT PROPERTY LIST

Address	Details
505 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
503 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
501 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
407 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
405 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
403 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
401 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
301 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
303 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
305 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
307 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
309 SILVER KING LN, ROCKVILLE, MD 20850	RESIDENCE
300 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
302 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
304 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
306 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
308 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
400 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
402 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
404 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
500 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
502 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
504 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
506 BARNSIDE PL, ROCKVILLE, MD 20850	RESIDENCE
102 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
104 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
106 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
108 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
107 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
109 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
111 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
113 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
115 GRAND CHAMPION DR, ROCKVILLE, MD 20850	RESIDENCE
102 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
104 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
106 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
108 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
103 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
105 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
107 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
109 WICKWOOD DR, ROCKVILLE, MD 20850	RESIDENCE
103 WATKINS OV, ROCKVILLE, MD 20850	RESIDENCE
105 WATKINS OV, ROCKVILLE, MD 20850	RESIDENCE
102 DUNLOGGIN DR, ROCKVILLE, MD 20850	RESIDENCE
103 DUNLOGGIN DR, ROCKVILLE, MD 20850	RESIDENCE
104 DUNLOGGIN DR, ROCKVILLE, MD 20850	RESIDENCE

55 WEST GUDE DRIVE - 500' RADIUS ADJACENT PROPERTY LIST

Address	Details
105 DUNLOGGIN DR, ROCKVILLE, MD 20850	RESIDENCE
106 DUNLOGGIN DR, ROCKVILLE, MD 20850	RESIDENCE
107 DUNLOGGIN DR, ROCKVILLE, MD 20850	RESIDENCE
KING FARM NEWSLETTER	HOME OWNERS ASSOCIATION
45 WEST GUDE DRIVE, ROCKVILLE, MD 20850	MATAN, INC.
15 WEST GUDE DRIVE, ROCKVILLE, MD 20850	MATAN, INC.
	TENNAT OF MATAN, INC MONTGOMERY
45 WEST GUDE DRIVE, ROCKVILLE, MD 20850	COUNTY PUBLIC SCHOOLS
15 WEST GUDE DRIVE, ROCKVILLE, MD 20850	TENNAT OF MATAN, INC AARP
15 WEST GUDE DRIVE, ROCKVILLE, MD 20850	TENNAT OF MATAN, INC FIRST TITLE & ESCROW
2 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
3 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
4 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
5 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
6 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
7 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
8 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
9 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
10 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
11 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
12 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
13 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
14 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
15 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
16 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
17 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
18 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
19 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
20 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
21 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
22 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
23 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
24 HARVARD CT, ROCVILLE, MD 20850	RESIDENCE
803 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
805 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
807 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
809 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
811 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
813 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
815 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
817 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
819 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
821 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
823 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
825 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE

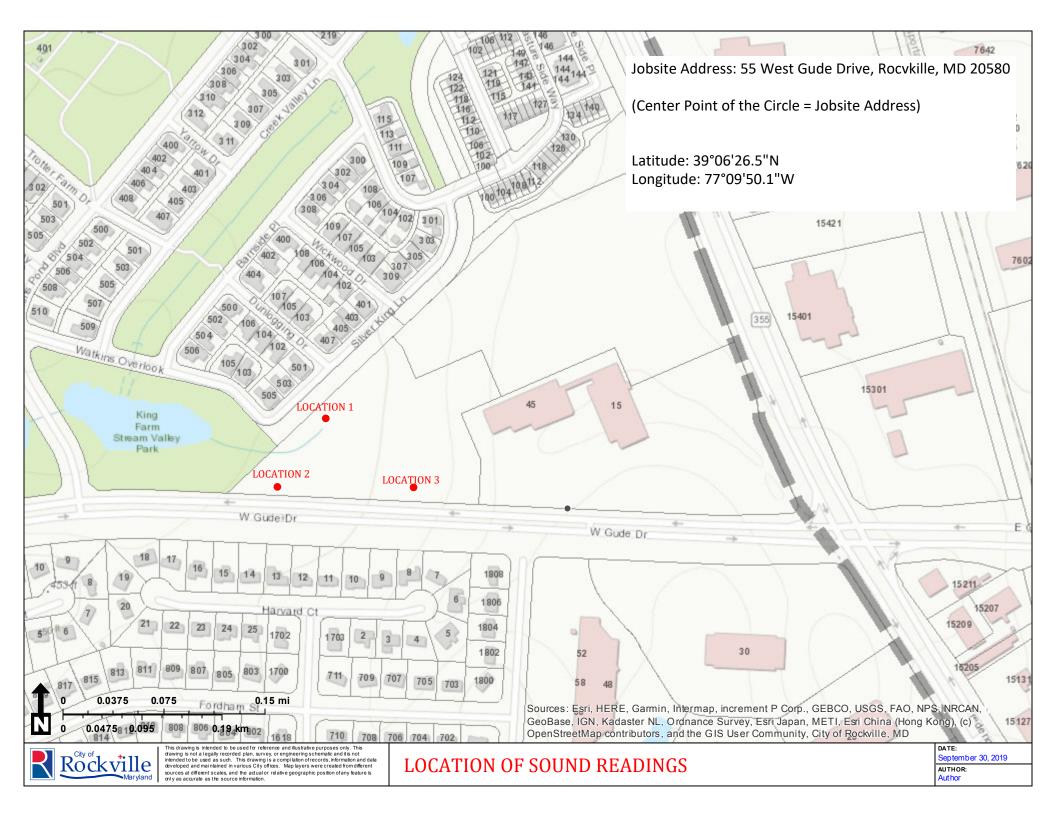
55 WEST GUDE DRIVE - 500' RADIUS ADJACENT PROPERTY LIST

Address	Details
703 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
705 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
707 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
709 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
711 FRODHAM ST, ROCKVILLE, MD 20850	RESIDENCE
1800 YALE PLACE, ROCKVILLE, MD 20850	RESIDENCE
1802 YALE PLACE, ROCKVILLE, MD 20850	RESIDENCE
1804 YALE PLACE, ROCKVILLE, MD 20850	RESIDENCE
1806 YALE PLACE, ROCKVILLE, MD 20850	RESIDENCE
1808 YALE PLACE, ROCKVILLE, MD 20850	RESIDENCE
1700 AUBURN AVE, ROCKVILLE, MD 20850	RESIDENCE
1702 AUBURN AVE, ROCKVILLE, MD 20850	RESIDENCE
1703 AUBURN AVE, ROCKVILLE, MD 20850	RESIDENCE

Noise Suppression – Implementation Plan (55 West Gude Drive)

- Construction equipment will be equipped with well-maintained and effective mufflers, and moving parts shall be well lubricated to avoid unnecessary noise from squeaking parts. Minimize banging, clattering, buzzing and other annoying types of noises.
- Slamming of tailgates is prohibited. Advise all delivery and onsite dump truck drivers of noise mitigation procedures prior to work.
- Avoid unnecessary backing of equipment and trucks. Configure the site to maximize forward movement, especially during the excavation phase of the project.
- Where possible, use the local power grid to reduce the use of generators and internal combustion powered pumps.
- Avoid prolonged idling of equipment. If equipment is not utilized for long periods, operator should shut off equipment to reduce idling noise.
- Noise levels will be monitored on a regular basis by Whiting-Turner with the decibel levels and locations of the monitoring sites kept in a log onsite, which shall be available for inspection and review upon request. Decibel readings will be taken utilizing a Model SLM-25 Sound Level Meter
- A hydraulic vibratory driver will be used to for the steel piles during sheeting and shoring operations.
 The hydraulic vibratory driver is being used in lieu of a standard impact hammer to reduce the noise impact.





Baseline Sound Readings for 55 West Gude Drive.

	Spot 1	Spot 2	Spot 3	Average
7:30am	65.5	69.4	63.7	66.2
8:00am	63.2	64.3	61.6	63.03333
8:30am	58.7	54.9	58.9	57.5
9:00am	55.9	56.6	57.7	56.73333
9:30am	56.8	59.4	58.1	58.1
10:00am	58.7	62.5	60.6	60.6
10:30am	59.6	63.8	63.7	62.36667
11:00am	55.1	76.7	58.6	63.46667
11:30am	56.5	77.5	55.9	63.3
1:00pm	53.8	76.2	56.4	62.13333
1:30pm	52.6	81.2	57.1	63.63333
2:00pm	55.5	76.9	53.8	62.06667
2:30pm	56.6	80.3	55.8	64.23333

Total 57.38333

The above chart includes a compilation of the decibel readings taken at the corners of the jobsite closest to the neighboring properties (Reference Map on next page). These readings were taken by Whiting-Turner utilizing a Model SLM-25 Sound Level Meter with a decibel range of 30 – 130 dBA. These baseline readings are to represent the ambient sound levels at 55 West Gude Drive. As shown in the above chart the average decibel level from the hours of 7:00AM to 3PM was 57.38 dBA.

Whiting-Turner will take sound readings throughout construction including obtaining readings during the activities outlined in the Noise Suppression - Scope of Work above. These readings will be taken periodically throughout these activities and documented in an onsite binder and filed electronically. This will allow for proper monitoring and documentation of decibel levels throughout project construction.



Anticipated Decibel Levels per Equipment

(Below Table obtained from the Federal Highway Administration)

Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors.

Equipment Description	Impact Device?	Acoustical Usage Factor (%)	Spec. 721.560 L _{max} @ 50 feet (dBA, slow)	Actual Measured L _{max} @ 50 feet (dBA, slow) (Samples Averaged)	Number of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	N/A	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	N/A	0
Blasting	Yes	N/A	94	N/A	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	N/A	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
		20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA,	No	50	70	73	74



VMS Signs)					
Gradall	No	40	85	83	70
Grader	No	40	85	N/A	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydraulic Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	N/A	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarifier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/Chipping Gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (single nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Sheers (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	N/A	0
Tractor	No	40	84	N/A	0
Vacuum Excavator (Vac-Truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete	No	20	80	80	1



Mixer					
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

For each generic type of equipment listed in Table 9.1, the following information is provided:

- an indication as to whether or not the equipment is an impact device;
- the acoustical usage factor to assume for modeling purposes;
- the specification "Spec" limit for each piece of equipment expressed as an L_{max} level in dBA "slow" at a reference distance of 50 foot from the loudest side of the equipment;
- the measured "Actual" emission level at 50 feet for each piece of equipment based on hundreds of emission measurements performed on CA/T work sites; and
- the number of samples that were averaged together to compute the "Actual" emission level.

A comparison of the "Spec" emission limits against the "Actual" emission levels reveals that the Spec limits were set, in general, to realistically obtainable noise levels based on the equipment used by contractors on the CA/T Project. When measured in the field, some equipment such as pile drivers, sand blasting, demolition shears, and pumps tended to exceed their applicable emission limit. As such, these noisy devices needed to have some form of noise mitigation in place in order to comply with the Spec emission limits. Other equipment, such as clamshell shovels, concrete mixer trucks, truck-mounted drill rigs, man-lifts, chipping guns, ventilation fans, pavers, dump trucks, and flatbed trucks, easily complied. Therefore, the Spec emission limits for these devices could have been reduced somewhat further. It is recommended that the user review the RCNM User's Guide contained in Appendix A for detailed guidance regarding application of values contained in Table 9.1.

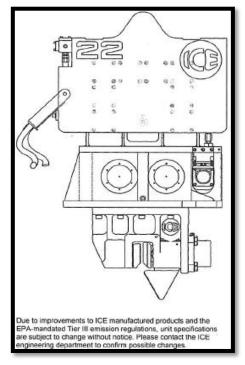


Model 22-30 **Hydraulic Vibratory Driver/Extractor**

- 2,200 in-lb eccentric moment
- 300 HP Cat® C-7 Tier 3 Engine
- Suspended weight of 10,800 lbs
- 54 tons of line pull for extracting
- Precision cast high-density eccentric moment combined with a low-mass transmission provides the maximum possible pile amplitude.
- Variable hammer weight with optionally available bias weights. Add up to 2,400 lbs of driving weight for high friction or otherwise difficult soils.
- Patented on-the-hammer braking valve minimizes unwanted boom shake.
- Super-tough forged gears provide an industry unmatched 20-year useful life.
- 54-ton elastomeric suppressor handles your toughest pulling jobs while providing the industry's highest working load safety factor.
- New 300 HP Caterpillar® C-7 Tier 3 electronic engine senses changes in operating conditions and instantly compensates by adjusting speed, injection timing and air/fuel ratio. Electronic monitoring warns of engine trouble, pinpoints engine faults for quick diagnosis and repair, and logs a complete operating history.
- State of the art Chevron Clarity® non-toxic and biodegradable hydraulic oil.
- Clamps include internal holding valves for safety and extra-heavy wall cylinders machined from solid blocks to eliminate cylinder guards.
- Highest quality VOAC pumps and Rexroth motors in time proven reliable open-loop hydraulic system ensure maximum efficiency, maximum reliability and simpler, quicker unit serviceability.
- Optionally available digital radio remote provides total operator freedom of movement.
- Made in the USA by the industry's most technologically innovative manufacture of foundation equipment since 1974.



Model 22-30 **Hydraulic Vibratory Driver/Extractor**



HYDRAULIC CLAMPS:	MODEL 126C UNIVERSAL CLAMP	MODEL 127B Z- PILE CLAMP	MODEL 80B CASING CLAMPS W/ 5' BEAM	MODEL 55B TIMBER, CONCRETE & PIPE CLAMP
CLAMP FORCE	125 tons (1112 kN)	125 tons (1112 kN)	160 tons (1423 kN)	53 tons (472 kN)
WEIGHT	2185 lbs (991 kg)	3190 lbs (1447 kg)	2821 lbs (1279 kg)	4970 lbs (2254 kg)
WIDTH	12 in (305 mm)	18 in (457 mm)	13.75 in (349 mm)	27 in (686 mm)
HEIGHT	39 in (959 mm)	41 in (1048 mm)	26 in (654 mm)	79 in (2007 mm)

VIBRATOR:	MODE	_ 22-30	
ECCENTRIC MOMENT	2200 in-lbs	25 kg-m	
MAX FREQUENCY	1615 vpm	27 Hz	
CENTRIFUGAL FORCE	81 tons	725 kN	
AMPLITUDE (FREE HANGING)	0.89 in	23 mm	
MAX LINE PULL FOR EXTRACTING	54 tons	480 kN	
WEIGHT (NO CLAMP OR HOSES)	7900 lbs	3583 kg	
NON-VIBRATING WEIGHT	2960 lbs	1342 kg	
HEIGHT (WITHOUT CLAMP)	80 in	2032 mm	
LENGTH	76 in	1930 mm	
WIDTH	21 in		
THROAT WIDTH	14.3 in		
HYDRAULIC HOSE LENGTH	150 ft	46 m	
HYDRAULIC HOSE WEIGHT	1425 lbs		
POWER UNIT	MODEL 300E		
ENGINE	Caterpillar C		
POWER	300 HP	224 kW	
OPERATING SPEED	2200 rpm		
MAX DROVE [RESSIRE	5500 psi		
DRIVE FLOW	91 gpm		
CLAMP PRESSURE	4800 psi		
CLAMP FLOW	6.3 gpm	24 lpm	
WEIGHT (W/ FULL FLUID & FUEL)	10455 lbs	4741 kg	
LENGTH	127 in	3226 mm	
WIDTH	64 in	1626 mm	
HEIGHT	69 in	1753 mm	
HYDRAULIC RESERVOIR	275 gal	1041 liters	
FUEL CAPACITY	118 gal	447 liters	

WILLARD HACKERMAN (1918-2014)

FOUNDED 1909

THE WHITING-TURNER CONTRACTING COMPANY

ENGINEERS AND CONTRACTORS

CONSTRUCTION MANAGEMENT
GENERAL CONTRACTING
DESIGN-BUILD
SPECIALTY CONTRACTING
PRECONSTRUCTION
BUILDING INFORMATION MODELING
INTEGRATED PROJECT DELIVERY

6305 IVY LANE, SUITE 800 GREENBELT, MARYLAND 20770 301-656-7800 INSTITUTIONAL
COMMERCIAL
CORPORATE
TECHNOLOGY
INDUSTRIAL/PROCESS
INFRASTRUCTURE
SUSTAINABILITY

October 1, 2019

SUBJECT: Pardon our Construction

To Nearby Residents and Business Owners,

We wish to advise you that a new construction project, Silverstone Rockville Senior Living, will be built at 55 West Gude Drive in Rockville, Maryland. The project includes below grade parking and 6 stories above ground. The excavation is scheduled to start early November 2019 and the construction project will take approximately 20 months. The work hours will be 7:00 am - 5:00 pm Monday through Friday. Weekend work will be intermittent and weather dependent, with working hours of 9:00 am to 5:00 pm.

Please feel free to contact me with any questions or comments.

Sincerely,
The Whiting-Turner Contracting Company

Joe Bergmeister Project Manager 713-205-1827

